Montana Department of Transportation

FINAL REPORT

SEP 14 DESIGN-BUILD PROJECT

For

DUPUYER – SE RECONSTRUCTION PROJECT
Pondera County

Project Number: STPP-BR 3-3(18)68
Control Number: 4051

October 18, 2006

(**Report Available At:** http://mdtinfo.mdt.state.mt.us/const/net/internal/reports/pcr-reports/)

MONTANA DEPARTMENT OF TRANSPORTATION

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EXECUTIVE SUMMARY

Introduction - The MDT Design-Build Team and Technical Review Committee (TRC) for this project developed the necessary documentation, solicited Statements of Qualifications and requested Technical Proposals and Bid Price Proposals from three short-listed Design-Build Firms. A design-build contract was executed for the Dupuyer – SE Reconstruction Project on June 6, 2005, the Notice to Proceed was issued on July 1, 2005 and the project was substantially completed on July 14, 2006.

Purpose - The proposed Design-Build contracting method is an innovative process that is being considered by transportation agencies for the construction of highway projects. The Design-Build contracting method places the responsibility of design and construction with a single legal contracting entity. The Design-Build contracting method may result in a more cost efficient design as a result of the designer giving greater consideration to construction methods. This contracting method should result in a reduction in the time required from initiation of the project to construction completion of the roadway and bridge improvements. Use of new standards for horizontal and vertical alignments will improve sight distances and roadway widening should reduce the accident rate along the route. MDT anticipates that use of the Design-Build method will result in a more cost effective project with a shorter overall project delivery period.

Project Scope - The project included Design and Construction activities required for reconstructing U.S. Highway 89 from Reference Post 70.53 south of Dupuyer, north to Reference Post 74.96, in Pondera County. Major items or work included reconstruction of the existing roadway to meet current MDT standards for a rural minor arterial in rolling terrain and provided for two 3.6-meter wide driving lanes and 2.2 meter wide shoulders to accommodate future overlays; and construction of two new bridges and one new large drainage structure (Double Cell Reinforced Box Culvert) to meet MDT hydraulic and environmental requirements (grizzly bear passage) at the three significant drainage crossings within the project limits. Approximate locations are:

- Jensen Coulee – Sta. 674+00± (Bridge Structure)
- Middle Fork – Dry Fork of the Marias River – Sta. 677+50± (Bridge Structure)
- Matchett Coulee, North Fork – Dry Fork of the Marias River – Sta. 717+00± (Large Pipe Structure)

Request For Qualifications - The Request for Qualifications (RFQ) package was advertised on January 14, 2005. Statement of Qualifications (SOQ) responses were received from five design-build teams (Firms) on February 11, 2005. A Technical Review Committee (TRC) consisting of eight MDT staff members from various project-related disciplines and one FHWA representative independently evaluated and scored the SOQ of the five teams based on established Evaluation Criteria and Scoring Guide. One Firm did not receive an evaluation score high enough to be short-listed. The TRC produced a ranked short list of four Firms that were invited to submit Proposals.

Technical Proposal - MDT developed selection procedures to provide a balanced assessment of the experience and qualifications of the Firm, the proposed project plan, the project completion time and the project cost. Proposals were submitted in two separate covers, one containing the Technical Proposal and one sealed containing the Bid Price Proposal 14 days later. The Technical Proposals were scored and submitted to the Selection Committee before any Bid Price Proposals were opened. The Technical Proposals were scored based on the criteria listed in the Scoring Table included in the RFP. The TRC reviewed and evaluated each Technical Proposal according to the established criteria based on a maximum possible value of 6,000 points per TRC member.

Bid Price Proposal: - Contract Plans Bureau publicly opened the sealed Bid Price Proposals at 10:00 AM, May 26, 2005. Contract Plans Bureau and the Design-Build Engineer multiplied each Firm's contract time by the cost/day value of $4008.00 contained in the RFP. This value was added to the Bid Price Proposal amount and resulted in the Time-Adjusted Bid Price. The Time Adjusted Bid Price Amount was divided by the Total Technical Proposal Score provided by the TRC to determine the lowest Adjusted Score. The lowest Adjusted Score is considered the best value proposal for MDT. Contract Plans Bureau and the Design-Build Engineer provided the Adjusted Score and supporting information for each Firm to the Selection Committee.

The following formula was used to determine the Adjusted Score for each Firm:

$$\text{Adjusted Score} = \frac{\text{Contract Time (days) x Time Value (\$) + Bid Price Proposal Amount (\$)}}{\text{Technical Proposal Total Score}}$$

The Selection Committee reviewed the Bid Price Proposals and Technical Proposal evaluation and scoring information provided by the TRC and approved an award recommendation.

Post Construction De-Briefing – MDT's Design-Build Engineer arranged and facilitated separate de-briefing meetings with staff members from MDT Great Falls District Construction and Design Engineering, MDT Bridge Bureau, MDT Hydraulics Section, Construction Contractor and Design Consultant. The meetings were conducted between August 15th and September 29, 2006. The purpose of the Post Construction De-Briefings is to provide an opportunity for all stakeholders to review and discuss the completed project and provide input related to the design and construction phase of MDT's Design-Build process.

CONCLUSIONS

Use of the Design-Build contracting method for the third and final MDT Pilot Project has accomplished the purpose of the program as stated in the work plan by producing a savings in time and reduction in the MDT resources necessary to design and construct the project. The savings in time is clearly evident since the project progressed from preliminary engineering through R/W acquisition to contract award in 8 months. The design and construction was substantially completed in 12 months, 14 days. Since the Environmental Document was completed and approved prior to issuing the RFP, the total time period of approximately 20 months is much less than similar design/bid/build projects that usually require as much as 3 to 5 years from preliminary engineering to contract advertisement (includes time required to complete and approve an Environmental Document), plus the time necessary to award and construct the project, typically an additional 1.5 to 2 years. This project has been another

positive step in the Design-Build Pilot Program process that will allow MDT to implement this innovative contracting method. Based on in-house and industry reactions and comments received during the selection and award de-briefings and post construction de-briefings, the overwhelming opinion is that the Design-Build contracting method has been a successful project delivery method for MDT.

The lessons learned from this project and the two previous Design-Build Pilot Projects will provide relevant and valuable information that can be utilized by legislators in deliberating the merits of continuing the design-build contracting program and providing an additional tool that MDT can use to expedite project delivery.

For a summary of the de-briefing comments related to the design-build process for this project, see pages 26, 27 and 28 of this report.

This report was prepared by:

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FINAL REPORT FOR SEP 14 DESIGN-BUILD PROJECT

Dupuyer – SE Reconstruction Project
STPP-BR 3-3(18)68 [CN 4051]

I. INTRODUCTION

The Montana Department of Transportation (MDT) submits this final report under the provisions of Special Experimental Project No. 14 (SEP 14) for the use of innovative contracting practices.

The MDT Design-Build Team and Technical Review Committee (TRC) for this project developed the necessary documentation, solicited Statements of Qualifications and requested Technical Proposals and Bid Price Proposals from three short-listed Design-Build Firms. A design-build contract was executed for the Dupuyer – SE Reconstruction Project on June 6, 2005, the Notice to Proceed was issued on July 1, 2005 and the project was substantially completed on July 14, 2006.

II. PURPOSE

The proposed Design-Build contracting method is an innovative process that is being considered by transportation agencies for the construction of highway projects. The Design-Build contracting method places the responsibility of design and construction with a single legal contracting entity. The Design-Build contracting method may result in a more cost efficient design as a result of the designer giving greater consideration to construction methods. This contracting method should result in a reduction in the time required from initiation of the project to construction completion of the roadway and bridge improvements. Use of new standards for horizontal and vertical alignments will improve sight distances and roadway widening should reduce the accident rate along the route. MDT anticipates that use of the Design-Build method will result in a more cost effective project with a shorter overall project delivery period.

MDT also desires to use the Design-Build method as a means of exploring innovative contracting methods. Historically, MDT has used the design/bid/build method and has very limited experience with the Design-Build method. With increasing demands on available highway funds, higher materials and fuel costs, reductions in MDT staffing levels and the prospect of program funding increases, MDT is actively pursuing methods that have the potential to address these issues and enhance the use of each transportation tax dollar. The Design-Build method of contracting is a potential tool by which this goal can be accomplished.

III. SELECTION AND AWARD PROCESS

A. PROJECT SCOPE

This project included Design and Construction activities required for reconstructing U.S. Highway 89 from Reference Post 70.53 south of Dupuyer, north to Reference Post 74.96, in Pondera County. The following are the major scope of work items related to the proposed reconstruction project:

Roadway

- Reconstructed existing roadway to meet current MDT standards for a rural minor arterial in rolling terrain and provided for two 3.6-meter wide driving lanes and 2.2 meter wide shoulders to accommodate future overlays.
- Used a design speed of 90 km/hr and design for WB-20 trucks.
- Transitioned reconstructed/widened roadway back to existing roadway with MDT standard tapers.
- Provided new surfacing for reconstructed roadway.
- Provided drainage and irrigation facilities to meet current MDT hydraulic standards.
- Provided required temporary and permanent fencing.
- No landscaping or irrigation was provided beyond site restoration and re-vegetation.

Bridge/Large Drainage Structures

- Provided two bridges and one large drainage structure (Double Cell Reinforced Box Culvert) to meet MDT hydraulic and environmental requirements (grizzly bear passage) at the three significant drainage crossings within the project limits:
  - Jensen Coulee – Sta. 674+00± (Bridge Structure)
  - Middle Fork – Dry Fork of the Marias River – Sta. 677+50± (Bridge Structure)
  - Matchett Coulee, North Fork – Dry Fork of the Marias River – Sta. 717+00± (Large Pipe Structure)
- Designed structures to AASHTO Standard Specifications for Highway Bridges, 17th Edition – 2002, HS 25 Live Load; or AASHTO LRFD 3rd Edition – 2004, HL 93 Live Load.

Utilities

- Provided existing utility adjustments and relocations required for construction of the improvements and relocated utilities within the final right of way limits close to the permanent fencing.

Construction Sequencing

- Maintained at least one functional traffic lane and provide for alternating traffic flow in both directions. Appropriate traffic control measures were utilized in accordance with the Firm's Traffic Management Plan and MUCTD.

Permits and Environmental Process

- Identified and utilized an Environmental Coordinator for the Firm and provided required temporary and permanent environmental permits required for the project.

General

- Design was completed in metric units.
- Provided all surveying, mapping and engineering design services necessary to prepare the plans and specifications required to construct the project.
- MDT provided all right of way services and obtained required right of way prior to issuing the RFP and the project was completed within the R/W provided.
- The Firm provided a Quality Management Plan that included quality control programs for design and construction activities.
- MDT provided construction engineering and inspection services (Quality Assurance and Independent Assurance).

B. SCHEDULE OF EVENTS

Below is the schedule of events that took place in the selection process.

DATE	EVENT
January 14, 2005	Advertised RFQ
February 11, 2005	SOQ Response Date
March 1, 2005	Firms Short Listed
April 1, 2005	Issued RFP
April 7, 2005	Utility Owner Meeting
April 7, 2005	Resource Agency Meeting
April 11, 2005	Question Deadline for the Pre-Proposal Meeting
April 12, 2005	Pre-Proposal Meeting
May 13, 2005	Technical Proposal Due by 10:00 a.m. local time
May 26, 2005	Bid Price Proposal Due by 10:00 a.m. local time
May 26, 2005	Public Bid Price Proposal Opening at 10:00 a.m. local time.
June 6, 2005	Contract Awarded
July 1, 2005	Issued Notice to Proceed
July 14, 2006	Construction Substantially Completed

C. HISTORY

Request For Qualifications:

The Request for Qualifications (RFQ) package was advertised on January 14, 2005. Statement of Qualifications (SOQ) responses were received from five design-build teams (Firms) on February 11, 2005. A Technical Review Committee (TRC) consisting of eight MDT staff members from various project-related disciplines and one FHWA representative independently evaluated and scored the SOQ of the five teams based on established Evaluation Criteria and Scoring Guide. One Firm did not receive an evaluation score high enough to be short-listed. The TRC produced a ranked short list of four Firms that were invited to submit Proposals.

MDT developed selection procedures in order to provide a balanced assessment of the experience and qualifications of the Firms. These procedures were used to determine the ranked short list of Firms to receive the RFP and be invited to submit proposals. The TRC reviewed and evaluated the SOQ according to the following criteria based on a maximum possible value of 10,000 points per TRC member.

SOQ Scoring Guide:

Each evaluation criteria was assigned a Scoring Weight and the TRC ranked each Firm by criteria on a 0 to 10 scale, with 10 being best. The TRC considered the following guidelines when determining the ranking score for each criteria.

Superior Response (9.5-10.0): A superior response will be a highly comprehensive, excellent reply that meets all of the requirements of the areas within the specific criteria. In addition, the response covers areas not originally addressed within the SOQ evaluation criteria and includes additional information and recommendations that would prove both valuable and beneficial to MDT. This response is considered to be an excellent standard, demonstrating the Firm's authoritative knowledge and understanding of the project.

Very Good Response (8.5-9.4): A very good response will provide useful information, while showing experience and knowledge within the evaluation criteria. The response is well thought out and addresses all requirements set forth in the RFQ. The Firm provides insight into their expertise, knowledge and understanding of the subject matter outlined in the criteria.

Good Response (7.5-8.4): A good response meets all the requirements of the RFQ and has demonstrated in a clear and concise manner a thorough knowledge and understanding of the subject matter outlined in the criteria. This response demonstrates an above average performance with no apparent deficiencies noted.

Fair Response (6.5-7.4): A fair response meets the requirements of the RFQ in an adequate manner. This response demonstrates an ability to comply with guidelines, parameters, and requirements with no additional information put forth by the Firm.
Poor Response (6.0-6.4): A poor response minimally meets most requirements of the RFQ. The Firm has demonstrated knowledge of the subject matter only as outlined in the criteria.

Inadequate Response (0-5.9): An inadequate response does not meet the requirements of the

RFQ. The Firm has not demonstrated knowledge of the subject matter outlined in the RFQ and their response is considered inadequate.

SOQ EVALUATION CRITERIA SCORING TABLE

EVALUATION CRITERIA NO.	DESCRIPTION	SCORING WEIGHT	RANKING	TOTAL SCORE
1	Provide an SOQ transmittal letter that identifies the legal entity (business structure) authorized to render the design-build services and provide a Letter of Commitment executed by each principal company of the Firm's Design-Build team. Include a signed and dated copy of any Addendum issued to the RFQ.	10		
2	Provide evidence or proof of capability to meet the requirements for insurance and bonding capacity.	10		
3	Identify participating companies and business addresses of the Firm members. Provide an organization chart relating to the project and include the names, titles, classifications and experience (one page resumes) of key personnel for each of the Firm members and the overall Project Manager, Design Manager, Construction Manager, Quality Control Manager and Utility Coordinator.	200		
4	Demonstrate past experience of Firm members working together on similar type projects, both for construction and architectural/engineering services. May include design-build and design/bid/build projects.	100		
5	Design-Build Experience - Provide a listing of active and recently completed design-build projects, including starting and completion dates or anticipated completion date, budget, owner, owner performance evaluation (if available), name and telephone numbers of owner's project representative and names of Firm team members that performed engineering design and construction activities. Past design-build experience may be drawn from projects contracted by MDT, other DOT, private industry or local governments.	150		
6	Other Experience - Provide a listing of active and recently completed projects similar to this project, other than design-build projects, including starting and completion dates or anticipated completion date, budget, owner, owner performance evaluation (if available), name and telephone number of owner's project representative and names of Firm team members that performed engineering design and construction activities.	150		

EVALUATION CRITERIA NO.	DESCRIPTION	SCORING WEIGHT	RANKING	TOTAL SCORE
7	Approach and Understanding of Project Requirements - Outline any potential innovations in design, materials and construction means/methods anticipated for the project. Briefly describe any project issues identified and outline proposed resolutions by the Firm. Identify in bullet format, the major tasks that will be performed by the Utility Coordinator during preparation of the proposal and during design and construction of the project.	200		
8	Other Information - List each Firm member's current Experience Modification Rate and provide copies of each Firm member's OSHA Form 300A for the last two years.	20		
9	Provide evidence of each Firm member's experience with local and state government entities, permit and regulatory agencies and community groups involved in the project.	50		
10	List details (dates, locations and reasons) of the Firm and its members of any citations and/or violations received from the Department of Environmental Quality (DEQ), Army Corps of Engineers, Environmental Protection Agency (EPA), any National Pollutant Discharge Elimination System (NPDES), Montana National Pollutant Discharge Elimination System (MPDES), or other agency permit citations and/or violations during the last three years.	30		
11	Provide an outline of your Firm's proposed Quality Management Plan for all project activities (design and construction) that incorporates effective QC/QA.	80		

Request for Proposal (RFP) packages were issued to the four short-listed Firms on April 1, 2005 with Technical Proposal responses due on May 13, 2005 and Bid Price Proposal responses due on May 26, 2005.

Four Technical Proposals were received on May 13, 2005 and four sealed Bid Price Proposal packages were received and publicly opened at 10:00 AM on May 26, 2005. Proposals were received from the following Firms:

- Shumaker Trucking and Excavating Contractors, Inc./Morrison Maierle, Inc./Frontier West, LLC
- Wickens Construction, Inc./Robert Peccia & Associates/Prince, Inc./Tamietti Construction Co.
- Schellinger Construction Company, Inc./HKM Engineering, Inc.
- Sletten Construction Company/CDM/Lacy & Ebeling Engineering, Inc./Century Companies, Inc.

The TRC evaluated and scored the written Technical Proposals submitted by each Firm prior to opening the Bid Price Proposals. This score was based on evaluation criteria and scoring guideline provided in the RFP package.

Technical Proposal:

MDT developed selection procedures to provide a balanced assessment of the experience and qualifications of the Firm, the proposed project plan, the project completion time and the project cost. Proposals were submitted in two separate covers, one containing the Technical Proposal and one sealed containing the Bid Price Proposal. The Firms were not requested to attend a meeting with the TRC to answer any questions with respect to the Technical Proposal before the Technical Proposal was evaluated and scored. All Technical Proposals were scored and submitted to Contract Plans Bureau before any Bid Price Proposals were opened. The TRC reviewed and evaluated each Technical Proposal according to the following criteria based on a maximum possible value of 6,000 points per TRC member.

Technical Proposal Scoring Guide:

Each evaluation criteria was assigned a Scoring Weight and the TRC ranked each Firm by criteria on a 0 to 10 scale, with 10 being best. The TRC considered the following guidelines when determining the ranking score for each criteria.

Superior Response (9.1-10.0): A superior response will be a highly comprehensive, excellent reply that meets all of the requirements of the areas within the specific criteria. In addition, the response covers areas not originally addressed in the RFP and DCCP evaluation criteria and includes additional information and recommendations that would prove both valuable and beneficial to MDT. This response is considered to be an excellent standard, demonstrating the Firm's authoritative knowledge and understanding of the project.

Very Good Response (8.1-9.0): A very good response will provide useful information, while showing experience and knowledge within the evaluation criteria. The response is well thought out and addresses all requirements set forth in the RFP and DCCP. The Firm provides insight into their expertise, knowledge and understanding of the subject matter outlined in the criteria.

Good Response (7.1-8.0): A good response meets all the requirements of the RFP and DCCP and has demonstrated in a clear and concise manner a thorough knowledge and understanding of the subject matter outlined in the criteria. This response demonstrates an above average performance with no apparent deficiencies noted.

Fair Response (6.1-7.0): A fair response meets the requirements of the RFP and DCCP in an adequate manner. This response demonstrates an ability to comply with guidelines, parameters, and requirements with no additional information put forth by the Firm.

Poor Response (4.1-6.0): A poor response minimally meets most requirements of the RFP and DCCP. The Firm has demonstrated knowledge of the subject matter only as outlined in the criteria.

Inadequate Response (0.0-4.0): An inadequate response does not meet the requirements of the RFP and DCCP. The Firm has not demonstrated knowledge of the subject matter outlined in the RFP and DCCP or has proposed a deviation from the RFP and DCCP requirements and the response is considered inadequate.

TECHNICAL PROPOSAL EVALUATION CRITERIA SCORING TABLE

EVALUATION CRITERIA NO.	DESCRIPTION	SCORING WEIGHT	RANKING	TOTAL SCORE
1	**Quality Management Plan -** Credit will be given for a timely, complete and comprehensive quality management plan that includes all phases of the project and incorporates effective QC/QA for design and construction.	70		
2	**Schedule** - Credit will be given for a comprehensive and logical schedule. Provide a written narrative to accompany the CPM flow chart schedule. Proper attention should be provided to the project's critical path elements and project float. The written narrative and summary schedule should include critical path items of work, float, early start and finish dates, and a close correlation between design activities and construction activities. The MDT established Contract completion date for this project is **September 1, 2006**. Work items for Revegetation and Epoxy Pavement Markings must be completed by **November 15, 2006**. The actual Contract completion date will be determined by the Firm and specified in the Technical Proposal and Bid Price Proposal submitted by the Firm. **Note:** *Proposals that include a Contract completion date beyond September 1, 2006 will be considered non-responsive.*	120		
3	**Allocation of Resources and Coordination of Project Activities** - Credit will be given for the project-designated allocation (distribution and quantity) of design and construction resources. Credit will also be given for proposed plans to coordinate project activities (Coordination Plan) for design, plan preparation, and obtaining approval of project component plans and specifications concurrently with construction activities of other project components that will minimize design changes and impacts to completed construction work. Explain how the resources (equipment and labor) of the various Firm members will be distributed and allocated to provide the most effective and concurrent design and construction activities. Identify and explain the role of each office location performing work on the project.	100		

EVALUATION CRITERIA NO.	DESCRIPTION	SCORING WEIGHT	RANKING	TOTAL SCORE
4	**Project Understanding and Approach** – The Firm will present a comprehensive plan for completing the specified work. The plan should address all significant design and construction issues and constraints and should demonstrate efficient use of manpower, materials, equipment, construction schemes and techniques for completing the project. Credit will be given for innovation in design and construction methods that minimize public impacts, reduce costs and accelerate project delivery by reducing the total project duration. Credit will also be given for design proposals that improve functionality and safety of the project and for exceeding minimum bridge and roadway material requirements to enhance project durability and reduce life cycle costs. **Innovation:** Firm will identify separately all innovative aspects as such in the Technical Proposal and they must be explained in detail with any estimated cost increase or cost savings. The Technical Proposal must clearly state whether any cost increase or cost decrease is included in the base Bid Price Proposal Amount. An innovative aspect does not include changes to specifications or established MDT policies and must conform to the RFP and DCCP requirements. Innovation should be limited to the Firm's means and methods, roadway alignments, approach to the project, use of new products and new uses for established products. **Alternatives or Options:** Proposed changes to the RFP, DCCP, Design Concept, specifications or established MDT policies should be identified as **Alternatives or Options** in the Technical Proposal and explained in detail with any estimated cost increase or savings to be considered together with innovative aspects, as the basis for scoring Technical Proposals. The estimated cost increase or cost decrease associated with any Alternative or Option that proposes changes to the RFP, DCCP, Design Concept, specifications or established MDT policies must not be included in the base Bid Price Proposal Amount.	180		

EVALUATION CRITERIA NO.	DESCRIPTION	SCORING WEIGHT	RANKING	TOTAL SCORE
5	**Experience and Staffing Plan** - Credit will be given for the Firm's experience on similar work and the individual team member's successful design-build experience. Consideration will be given to Firm leadership and areas of responsibility, Firm internal coordination plan, and Firm commitment to and history of providing a quality project, completed on time and within budget. The Firm will submit a staffing plan that clearly illustrates the key elements of the organizational structure proposed to accomplish the management, technical design, quality control, utility coordination, environmental coordination and permitting, construction and administrative services required. Project management and key personnel within each area of required services will be identified and past experience of each, as it relates to this project, will be discussed.	80		
6	**Claims and Dispute History** – Provide a record of all claims exceeding $50,000 for each principal Firm member during 2002, 2003, 2004 and any currently pending. Record will include history of claims pertaining to additional compensation or time extensions that are not negotiated and resolved through an Administrative Settlement, or final estimate quantity disputes that proceed, after final acceptance, to litigation or arbitration. Provide a history of disputes for 2002, 2003, 2004 and currently pending, that were escalated to the Board of Contract Appeals (or the equivalent with other owners) by each principal member of the Firm. Claim history records for each Firm member will be reviewed, evaluated and scored based on claims pertaining to additional compensation or time extensions that are not negotiated and resolved through an Administrative Settlement, or final estimate quantity disputes that proceed, after final acceptance, to litigation or arbitration. History of disputes being escalated to the Board of Contract Appeals (or the equivalent with other owners) by a member of the Firm will also be considered.	50		

Bid Price Proposal:

Contract Plans Bureau publicly opened the sealed Bid Price Proposals at 10:00 AM, May 26, 2005. Contract Plans Bureau and the Design-Build Engineer multiplied each Firm's contract time by the cost/day value of $4008.00 contained in the RFP. This value was added to the Bid Price Proposal amount and resulted in the Time-Adjusted Bid Price. The Time Adjusted Bid

Price Amount was divided by the Total Technical Proposal Score provided by the TRC to determine the lowest Adjusted Score. The lowest Adjusted Score is considered the best value proposal for MDT. Contract Plans Bureau and the Design-Build Engineer provided the Adjusted Score and supporting information for each Firm to the Selection Committee.

The following formula was used to determine the Adjusted Score for each Firm:

$$\text{Adjusted Score} = \frac{\text{Contract Time (days) x Time Value (\$) + Bid Price Proposal Amount (\$)}}{\text{Technical Proposal Total Score}}$$

The Selection Committee reviewed the Bid Price Proposals and Technical Proposal evaluation and scoring information provided by the TRC. The following is a summary of the proposal results:

FIRM	CONTRACT TIME (Days) x TIME VALUE ($4008.00) + BID PRICE PROPOSAL AMOUNT	TECHNICAL PROPOSAL TOTAL SCORE	ADJUSTED SCORE (Best Value)
Shumaker Trucking and Excavating Contractors, Inc./Morrison Maierle, Inc./ Frontier West, LLC	(396 Days) $8,253,337.00	42,548	193.98
Wickens Construction, Inc./ Robert Peccia & Associates/ Prince, Inc./ Tamietti Construction Company	(350 Days) $8,435,159.00	41,159	204.94
Schellinger Construction Company, Inc./ HKM Engineering, Inc.	(390 Days) $9,008,132.80	41,063	219.37
Sletten Construction Company/ CDM/Lacy & Ebeling Engineering, Inc./ Century Companies, Inc.	(392 Days) $9,329509.65	40,900	228.11

After reviewing the Technical Proposal Evaluation and Scoring information provided by the TRC and the Bid Price Proposals, the Selection Committee recommended the following:

1. All Proposals are considered responsive to the RFP and Firms are eligible for the stipend payment.

2. Award contract to the Shumaker Trucking and Excavating Contractors, Inc./Morrison Maierle, Inc./Frontier West, LLC team, with the lowest Adjusted Score considered the Best Value for MDT, in the amount of $6,666,169.00.

D. INDUSTRY REACTION TO THE SELECTION AND AWARD PROCESS

Industry reaction was solicited using a questionnaire that was sent to each Firm responding to the RFQ and short-listed Firms that respond to the RFP. Questions and comments received from industry during the RFQ process, from the pre-proposal meeting and during the RFP and proposal process were utilized to develop the following list of reactions and effects on the pilot program. In addition to industry reactions, reactions and comments from TRC members regarding the evaluation and scoring process for the SOQ and Technical Proposals are also included.

RESPONDER	REACTION	PROGRAM IMPACT
DB Contractor	Time allowed for submittal and information provided with RFQ was adequate.	None. Time allowed for preparation of SOQ was adequate for this project.
DB Contractor	Time allowed (2 weeks) between the date Technical Proposals were due and date Bid Price Proposals were due was adequate to allow completion of preliminary plans and quantities for obtaining price quotes from subcontractors and suppliers.	None. Bid Price Proposals will be due at least 14 calendar days after the Technical Proposals for future design-build projects, depending on size and complexity.
DB Contractor	It was noted that the stipend payment was too low for this project, based on the amount of effort required to develop the Technical and Bid Price Proposals.	MDT has established a sliding scale of stipend payment values based on the estimated construction cost of a project. This scale shown in the MDT Design-build Guidelines may be revised for future design-build projects.
TRC Members	The evaluation and scoring criteria included in the RFP coincided with the submittal sections required in the Technical Proposal which provided for each section to only contain specific criteria information. This made it much easier for Proposers to organize their proposals and review and evaluation by the TRC.	The MDT Design-Build Guidelines will be revised to include this as a requirement for future design-build projects.
DB Contractor and TRC Members	The RFP included adequate detailed explanation for how and where to include Innovations and Options/Alternatives in the Technical and Bid Price Proposals.	The MDT Design-build Guidelines will be revised to include the expanded explanations for how and where to include Innovations and Options/Alternatives in the Technical and Bid Price Proposals.

RESPONDER	REACTION	PROGRAM IMPACT
DB Contractors and Design Consultants	There was concern expressed related to timely response by utility owners with their proposed plans and estimated costs required to relocate/adjust utilities prior to the Technical and Bid Price Proposal submittal due dates and charges billed by the utility owners for their preliminary design services.	Future MDT design-build projects will require that a planning meeting be held with all utility owners during preparation of the RFP in order to clarify and anticipate the utility owners' preliminary engineering costs and how those costs will be addressed in the RFP.
DB Contractors, Design Consultants and TRC Members	Overall, the MDT design-build pilot program provides a fair and equitable procedure for evaluating, scoring and selecting a design-build Firm.	Only minor procedural and text changes to the project workplan have resulted from reactions received during the initial stages of the third and final design-build pilot project.

IV. DESIGN AND CONSTRUCTION PROCESS

A. GENERAL

The following were key persons directly involved in design and construction of the project and participated in the post construction de-briefing process:

Doug Wilmot – District Construction Engineer, MDT Great Falls District
Ed Toavs – District Operations Engineer, MDT Great Falls District
Mike Klette – Engineering Project Manager, MDT Great Falls District
Tom Hanley – Engineering Project Coordinator, Great Falls District
Russell Kastner – Engineering Project Technician
Steve Prinzing – DESS, MDT Great Falls District
Christie McOmber – District Projects Engineer, MDT Great Falls District
Jeania Cereck – Design Supervisor, MDT Great Falls District
Jerilee Weibel – ROW supervisor, MDT Great Falls District
Mike Sprague – ROW Specialist, MDT Great Falls District
Mark Goodman – MDT Hydraulics Section
Dustin Rouse – MDT Hydraulics Section
David Hedstrom – MDT Hydraulics Section
Kevin McCray – MDT Bridge Bureau
Steve Rumley – MDT Bridge Bureau
Joe Aline – Project Manager, Schmaker Trucking & Excavating Contractors, Inc.
Neil Cleveland – Construction Manager, Schmaker Trucking & Excavating Contractors, Inc.

Ken Carlstad - Superintendent, Schmaker Trucking & Excavating Contractors, Inc.
John Pavsek – Design Manager, Morrison Maierle, Inc.
Ken Neumiller – Quality Control Manager, Morrison Maierle, Inc.
Matt Pool – Roadway Design Engineer, Morrison Maierle, Inc.
Jim Scoles – Bridge Design Engineer, Morrison Maierle, Inc.

B. PURPOSE

The MDT Design-Build Engineer arranged and facilitated separate de-briefing meetings with staff members from MDT Great Falls District Construction and Design Engineering, MDT Bridge Bureau, MDT Hydraulics Section, Construction Contractor and Design Consultant. The meetings were conducted between August 15th and September 29th , 2006.

The purpose of the Post Construction De-Briefings is to provide an opportunity for all stakeholders to review and discuss the completed project and provide input related to the design and construction phase of MDT's Design-Build process. The following agenda was used to ensure specific items were addressed, but participants were encouraged to present other topics or issues during the meeting that were not listed on the agenda.

1. ***Contract Administration***
    a. Identify specific items that **enhanced** the overall design-build process and had a positive impact on project progress and quality.
    b. Identify specific items that were considered **shortcomings** in the overall design-build process and did or could have had a negative impact on project progress and quality.
2. ***Specific Issues/Problems and Subsequent Solutions***
3. ***Plans/Specifications Review and Approval Process***
4. ***Document Control***
5. ***Scheduling and Time to Complete Project.***
6. ***Quality Control***
    a. Design
    b. Construction
7. ***Coordination with MDT Functional Units***
8. ***Change Orders***
9. ***Potential Claims***
10. ***New Technology or Construction Methods Used***
11. ***Any Innovative Solutions or Methods.***
12. ***R/W Issues***
13. ***Permit Issues***
14. ***Other Items/Issues***

C. POST CONSTRUCTION DE-BRIEFING COMMENTS

AGENDA ITEMS	MDT FIELD STAFF
Contract Administration	Contract administration for the construction work was very similar to a normal design/bid/build project. Much more design involvement, approvals and overall paperwork was required of the EPM. ***The QC requirements and who is responsible for specific QC testing should be better defined in the RFP or in separate QC Guidelines.*** The following items were also noted: 1) Liked the speed that the project moved from preliminary to construction; 2) Was good for the EPM to be involved in development the RFP so he was familiar with the project; 3) It was recommended that other project field crew personnel also be added to the TRC; 4) It was recommended that the RFP provide specific guidance on how items such as traffic control and mobilization are to be paid on progress payments.
Specific Issues and Solutions	1. Should have been more emphasis placed on Technical Proposal review by MDT functional units. 2. It was recommended that prior to future D-B projects, additional D-B training should be provided for MDT staff as well as Consultants and Contractors, especially Subcontractors. 3. ***MDT D-B Guidelines need to provide information related to the type and process to be used for field notes since there are no pay items for the lump sum contract.***
Plans & Specifications Approval Process	It was recommended that the EPM and field crew for a D-B project only be assigned the one project due to the increased duties involved with the design approval process. However, because QC and quantity documentation is the responsibility of the D-B Firm, the MDT filed crew can be smaller, requiring less MDT resources.
Document Control	No document control was performed by the MDT field crew.
Schedule and Contract Time	D-B Firm proved required schedule updates. Time to complete the project was adequate.
Quality Control - Design	Designer did not provide EPM with any QC checked plans and specifications in accordance with their written Quality Management Plan.
Quality Control - Construction	D-B Firm did a good job with their QC. Other comments: 1) For some operations, the D-B Firm representative was not on site enough to provide adequate QC; 2) MDT staff had difficulty trusting D-B Firm's results; 3) Need more emphasis placed on traffic control; 4) ***The QC requirements and who is responsible for specific QC testing should be better defined in the RFP or in separate QC Guidelines.***
Coordination With MDT Functional Units	Although coordination with MDT functional units went well, ***future RFPs should list key contacts for MDT Functional Units responsible for the review and approvals so the EPM and D-B Firm know who gets submittals.***
Change Orders	There have been three change orders approved for the project. One was related to the fuel price adjustment, another for additional days due to the July 4th holiday, and the third related to PMS compaction results. The fuel price adjustment resulted in an increase of approximately $144,000. ***NOTE: The RFP for future D-B projects should specifically address the fuel price adjustment issue.***
Claims	No claims are anticipated for this project.
New Technology or Construction Methods	Contractor used GPS grading system that required only a grade checker and motor grader to achieve required grades.
Innovative Items	MDT designers, hydraulics staff and the D-B firm consultant worked together to develop an innovative solution to resolve a drainage basin issue that could have required lengthening bridges, but instead only required minor berm construction and securing a drainage easement. The solution proved satisfactory to all parties involved.

R/W Issues	1. Utilities could restrict or constrain construction activities if not relocated prior to start of construction. 2. Local cooperative utilities have limited resources and scheduling problems to meet the D-B project schedule.
Permit Issues	No problems were encountered and there were no recorded site visits by resource agency staff.
Other Items/Issues	Other comments from the MDT field crew included: 1) The best aspect of the D-B process was the efficiency of the contractor and overall speed of design and construction completion; 2) The D-B process may not be the best contracting method for a reconstruction project; 3) Need to provide more copies of the PFR and Technical proposal to field crew; 4) the estimate process needs to be automated for future D-B projects; 5) The RFP for future D-B projects should include specific guidelines for addressing materials in storage; 6) ***The RFP for future D-B projects should be more specific about the completion date for as-built plans and require a "draft" submittal to allow MDT an opportunity to review prior to final acceptance.***

AGENDA ITEMS	**MDT DISTRICT DESIGN TEAM**
Contract Administration	1. District liked their involvement during the preliminary design phase. 2. The process was enhanced by the involvement of the EPM and other construction personnel during the preliminary design phase and the design-build selection and contract award process. 3. The district design team would like more time to complete the preliminary design phase. 4. ***There was some confusion early in the design-build process getting MDT functional unit staff to understand and cooperate with the design-build process. This could be overcome on future projects by providing design-build process training to MDT functional unit staff so they know and understand their role in a design-build project.***
Specific Issues and Solutions	1. The RFP required the Firm to be responsible for contacting and negotiating with land owners regarding approaches, fences and other ROW related issues. However, this did not occur during the project and MDT ROW staff became involved in this process. ***It was suggested that RFP's for future design-build project include text noting that the Firm will coordinate with MDT ROW staff regarding these activities.***
Plans & Specifications Approval Process	1. It was agreed that 65% complete plans should be required for this type project. 2. Re-submittals of the 90% plans were limited since most minor plan changes after this stage were to be included in the as-built plans. 3. ***It was recommended that all summary tables be included at the 90% submittal stage, even though some of the quantities may not be finalized or 100% accurate. This would make it easier for MDT and the Firm's field crews to keep track of as-built quantities.***
Document Control	It was recommended that all project files be kept in the District. As-built plans should be kept in the District with distribution to appropriate MDT functional units and FHWA in Helena.
Schedule and Contract Time	Plan and specification review time provide was adequate.
Quality Control - Design	District design staff did not see any evidence of the Firm's design check lists or back check records. Did not have knowledge of whether the Firm's design engineer was following their design QC plan.
Quality Control - Construction	No involvement during construction.

Coordination With MDT functional Units	None required.
Change Orders	No comments noted.
Claims	No comments noted.
New Technology or Construction Methods	No comments noted.
Innovative Items	No comments noted.
R/W Issues	***1. MDT used an innovative process to obtain ROW for the project. The process worked because of the following: a) small town environment with much peer pressure on all land owners to participate; b) Overall strong public support for the project; and c) land owner trust of MDT ROW staff.*** 2. There were some internal MDT issues resulting from confusion about the ROW process being utilized and who was responsible for certain aspects of the process.
Permit Issues	Not aware of any issues or any agency site visits.
Other Items/Issues	1. ***The RFP for future design-build projects should designate a specific time schedule and deadline for as-built plan submittal and should also include a requirement for a pre-final submittal to be reviewed and approved by MDT prior to submittal of the final as-built plans.*** 2. Overall, on a 1 to 10 scale, 10 being the highest, the District design team rated the design-build process at 9.

AGENDA ITEMS	**MDT BRIDGE DESIGN MANAGER**
Contract Administration	The bridge portion of the project progressed very well from design through construction. Bridge Bureau had limited involvement during construction of the project, but did provide plan and specification reviews for the bridge items of work. The overall time to complete the project was much shorter than the typical design/bid/build process and Bridge Bureau felt this was an asset for the process.
Specific Issues and Solutions	There were hydraulic issues associated with the bridge water openings, but MDT Hydraulics worked with the Firm's designer to resolve the issues. Bridge Bureau staff were not directly involved in the issue resolution process.
Plans & Specifications Approval Process	1. Plans and specifications review and approval process was very efficient and the 14-day review and approval period was adequate. The D-B review and plan approval process was much easier to perform and required less time and resources than the typical consultant plan review process. However, it did require staff to suspend other work in order to complete the D-B review within the 14-day period. 2. It was recommended that MDT staff obtain more training in the design-build process in order to better understand functional unit roles and responsibilities. 3. Having a local (In Helena) designer was an asset for the bridge review portion of the project. 4. There was some confusion regarding the bridge plans review process that resulted in much of the interaction between the MDT bridge staff and the Firm's bridge designers being performed without keeping the MDT EPM in the communications loop.
Document Control	No comments noted.
Schedule and Contract Time	No comments noted.
Quality Control - Design	Plans and specifications submittals did not include the QC checklists and back check documentation as required by the Firm's Quality Management Plan.
Quality Control - Construction	No site visits performed by Bridge Bureau during construction.

Coordination With MDT functional Units	No involvement with any except Hydraulics Section.
Change Orders	No comments noted.
Claims	No comments noted.
New Technology or Construction Methods	No comments noted.
Innovative Items	No comments noted.
R/W Issues	No comments noted.
Permit Issues	No comments noted.
Other Items/Issues	Bridge Bureau staff liked the speed of the process, and would like to obtain more training in the design-build process and how it impacts roles and responsibilities.

AGENDA ITEMS	**MDT HYDRAULICS SECTION**
Contract Administration	1. It was agreed that the design-build process would not function well without completion of the environmental document that typically places constraints on the project. 2. ***It was recommended that future design-build projects involving significant hydraulics work require a Preliminary Hydraulics Location Report as part of the Proposal.***
Specific Issues and Solutions	1. The designer's hydraulic assumptions and data used for the design was not correct and resulted in significant effort to resolve the issues related to water openings and bridge lengths. 2. Inexperienced hydraulics designers, inadequate review of the information provided in the RFP and lack of design Quality Control oversight contributed to the hydraulic issues experienced during design of this project. 3. ***It is recommended that for future design-build projects involving significant hydraulic design, an MDT Hydraulics Section staff person be included as a member of the TRC in order to provide a more detailed review of the Firm's qualifications and Technical Proposal submittal.***
Plans & Specifications Approval Process	The hydraulic issues noted above resulted in increased bridge lengths and created a "domino" effect related to the profile and grading in the vicinity of the bridges and impacted the overall plan approval process.
Document Control	No comments noted.
Schedule and Contract Time	No comments noted.
Quality Control - Design	1. Lack of design oversight and back-checking. 2. No documentation presented to demonstrate designer followed design Quality Management Plan.
Quality Control - Construction	No involvement during construction.
Coordination With MDT functional Units	Worked directly with Firm's designer to resolve hydraulic issues and kept MDT's EPM in the communications loop.
Change Orders	No comments noted.
Claims	No comments noted.
New Technology or Construction Methods	No comments noted.
Innovative Items	No comments noted.
R/W Issues	Hydraulic issues noted above resulted in MDT securing a flood easement to mitigate increase in backwater from one drainage basin to another.
Permit Issues	No comments noted.

Other Items/Issues	Hydraulics feels the design-build process has an application for project delivery with MDT due to the speed with which a project can be completed. Overall, on a 1 to 10 scale, 10 being the highest, the Hydraulics Section rated the design-build process at 7.5.

AGENDA ITEMS	**D-B CONTRACTOR**
Contract Administration	1. There were some flaws in the RFP, but overall the process was a success. 2. Consultant was responsible for most of the work required to prepare the Technical Proposal. 3. Subcontractors were not involved in developing the Technical proposal and were treated the same as they would be for a typical design/bid/build project. 4. D-B Contractor performed an informal risk assessment prior to submitting Price Proposal. 5. The design firm had no equity in the project.
Specific Issues and Solutions	No comments noted.
Plans & Specifications Approval Process	***Including Summary frames with the plans approved for construction would be helpful to the Contractor by providing estimated quantities and locations of various culverts and fence.***
Document Control	The D-B Firm did not have a defined document control method.
Schedule and Contract Time	Contract time was adequate.
Quality Control - Design	No comments noted.
Quality Control - Construction	1. The QC pass/fail approach made it difficult to determine the consequences of any failing tests. 2. There was a difference in the testing equipment and testing procedures used by the D-B Firm's representative and MDT. 3. ***Providing QC Guidelines with each party's role clearly defined in the RFP would reduce the confusion over responsibility.***
Coordination With MDT Functional Units	No comments noted.
Change Orders	***Fuel price adjustment should be specifically addressed in the RFP.***
Claims	No claims are anticipated for this project.
New Technology or Construction Methods	Contractor used GPS grading system that required only a grade checker and motor grader to achieve required grades.
Innovative Items	No comments noted.
R/W Issues	1. The R/W process went very well and adjacent landowners were very cooperative during construction. 2. ***There was some confusion regarding the fencing. The RFP should specifically state that new fence will be required on both sides from beginning to end of the project.***
Permit Issues	No problems were encountered and there were no recorded site visits by resource agency staff.

Other Items/Issues	1. D-B Firm liked the process, especially the flexibility allowed during construction resulting from design and construction working together to resolve construction issues. 2. The best aspect of the D-B process was the good working relationship between the Contractor and MDT crew. 3. The least desirable aspect of the D-B process was the time, effort and cost of preparing the Technical and Price Proposals. 4. More training in the D-B process is needed for all parties involved in design-build projects.

AGENDA ITEMS	**DESIGN CONSULTANT**
Contract Administration	1. The RFP was good and well organized. 2. The Q&A program during the selection process worked very well. 3. Adequate time was provided for the Technical and Price proposal preparation. 4. Would have liked to know actual number that would be short listed instead of the 3 to 5 as noted in the RFQ. 5. Scoring criteria was good. 6. Like the reduced plan review time and effort. Allowed for fast tracking the design. 7. There was a lack of understanding of the D-B process. 8. Lack of understanding roles and responsibilities in the D-B process for MDT functional unit managers and staff.
Specific Issues and Solutions	No comments noted.
Plans & Specifications Approval Process	1. The 14-day review and approval time as well as the less critical type reviews streamlined the process and made it very timely, but there appeared to be too much review at the District level. 2. ***There was a lack of understanding of the D-B process and roles and responsibilities in the D-B process for MDT district and functional unit managers and staff.*** 3. ***RFPs for future D-B projects should include a better explanation of component plans as to when and how they are used to expedite the design and construction process.***
Document Control	The design consultant maintained a spreadsheet for plan and specification submittals, but was not involved in construction related submittals.
Schedule and Contract Time	Time allowed for design was adequate.
Quality Control - Design	The designer followed their written Quality Management Plan and has the check sheets and back check sheets on file. Was not requested to include with submittals. ***It was suggested that design QC submittal requirements be clarified in future D-B RFP.***
Quality Control - Construction	1. There was a difference in the testing equipment and testing procedures used by the D-B Firm's representative and MDT. 2. ***Providing QC Guidelines with each party's role clearly defined in the RFP would reduce the confusion over responsibility.***
Coordination With MDT Functional Units	Coordination was very good and was an asset for plan review and approval having an office in Helena near MDT headquarters.
Change Orders	No comments noted.
Claims	No comments noted.
New Technology or Construction Methods	Contractor used GPS grading system that required only a grade checker and motor grader to achieve required grades.

Innovative Items	There is a fear of using new ideas because it may conflict with generally accepted MDT methods, preferences or procedures.
R/W Issues	1. R/W acquisition process used was an innovative approach that worked well for this project. 2. It is important that coordination with impacted utility owners occurs early to ensure utilities are relocated prior to construction.
Permit Issues	The permit process went very well as a result of early coordination with the resource agencies.
Other Items/Issues	1. The overall D-B process was a very good project delivery tool. 2. Best aspect of the D-B process for designers was the short review and approval time and the streamlined plan review process. 3. Use of D-B on a regular basis would improve the overall process through experience.

V. CONCLUSIONS

Use of the Design-Build contracting method for the third and final MDT Pilot Project has accomplished the purpose of the program as stated in the work plan by producing a savings in time and reduction in the MDT resources necessary to design and construct the project. The savings in time is clearly evident since the project progressed from preliminary engineering through R/W acquisition to contract award in 8 months. The design and construction was substantially completed in 12 months, 14 days. Since the Environmental Document was completed and approved prior to issuing the RFP, the total time period of approximately 20 months is much less than similar design/bid/build projects that usually require as much as 3 to 5 years from preliminary engineering to contract advertisement (includes time required to complete and approve an Environmental Document), plus the time necessary to award and construct the project, typically an additional 1.5 to 2 years. This project has been another positive step in the Design-Build Pilot Program process that will allow MDT to implement this innovative contracting method. Based on in-house and industry reactions and comments received during the selection and award de-briefings and post construction de-briefings, the overwhelming opinion is that the Design-Build contracting method has been a successful project delivery method for MDT.

The lessons learned from this project and the two previous Design-Build Pilot Projects will provide relevant and valuable information that can be utilized by legislators in deliberating the merits of continuing the design-build contracting program and providing an additional tool that MDT can use to expedite project delivery.

Based on the current Design-Build Pilot Program process, the key items identified that enhanced this project include:

Selection and Award Process

- Overall, the MDT design-build pilot program provides a fair and equitable procedure for evaluating, scoring and selecting a Design-Build Firm.

- Bid Price Proposals were submitted 13 days after the Technical Proposals.

Design and Construction Process

- The 20-month design-build process substantially reduced the total project delivery time from the 3 to 5 years typically required to deliver a design/bid/build project (including completion and approval of the Environmental Document). This project proceeded from preliminary engineering through R/W acquisition to contract award in 8 months (Environmental Document was completed and approved prior to release of the RFP) and the design and construction was substantially completed in 12 months, 14 days.

- Provided MDT functional unit staff and field crew limited advance design-build training so they were familiar with the process and their role in review and approval of the design, plans and specifications and construction management and inspection.

- The bridge related plan and specification review and approval process was very efficient and the 14-day review and approval period was adequate. The D-B review and plan approval process was much easier to perform and required less time and resources than the typical consultant plan review process. However, it did require staff to suspend other work in order to complete the D-B review within the 14-day period.

- MDT used an innovative process to obtain ROW for the project. The process worked because of the following: a) small town environment with much peer pressure on all land owners to participate; b) Overall strong public support for the project; and c) land owner trust of MDT ROW staff.

- All design and construction stakeholders in this project generally felt it was a good process that was completed in a short time period, required less MDT manpower, resulted in a quality product and is a useful tool to expedite project delivery.

Based on the current Design-Build Pilot Program process, the key items identified as shortcomings to this project include:

Selection/Award Process

- It was noted that the stipend payment was too low for this project, based on the amount of effort required to develop the Technical and Bid Price Proposals.

- The evaluation and scoring criteria included in the RFP coincided with the submittal sections required in the Technical Proposal which provided for each section to only contain specific criteria information. This made it much easier for Proposers to organize their proposals and review and evaluation by the TRC. The MDT Design-Build Guidelines will be revised to include this as a requirement for future design-build projects.

- There was concern expressed related to timely response by utility owners with their proposed plans and estimated costs required to relocate/adjust utilities prior to the Technical and Bid Price Proposal submittal due dates and charges billed by the utility owners for their preliminary design services. Future MDT design-build projects will require that a planning meeting be held with all utility owners during preparation of the

RFP in order to clarify and anticipate the utility owners' preliminary engineering costs and how those costs will be addressed in the RFP.

Design and Construction Process

- MDT D-B Guidelines need to provide information related to the type and process to be used for field notes since there are no pay items for the lump sum contract.

- The QC requirements and who is responsible for specific QC testing should be better defined in the RFP or in separate QC Guidelines.

- The RFP for future D-B projects should specifically address the fuel price adjustment issue.

- It was recommended that prior to future D-B projects, additional D-B training should be provided to MDT staff as well as designers and contractors.

- It was recommended that an intermediate submittal be required (65% complete) before the 90% complete submittal so major changes can be incorporated early in the process. This would allow any minor revisions necessary after the 90% complete plans are stamped "Released for Construction" to be documented and changed during the as-built process.

- It is recommended that for future design-build projects involving significant hydraulic design, an MDT Hydraulics Section staff person be included as a member of the TRC in order to provide a more detailed review of the Firm's qualifications and Technical Proposal submittal.

- There was some confusion early in the design-build process getting MDT functional unit staff to understand and cooperate with the design-build process. This could be overcome on future projects by providing design-build process training to MDT functional unit staff so they know and understand their role in a design-build project.

- RFPs for future D-B projects should include a better explanation of component plans as to when and how they are used to expedite the design and construction process.

- It was suggested that RFP's for future design-build project include text noting that the Firm will coordinate with MDT ROW staff regarding these activities.

- It was recommended that all summary tables be included at the 90% submittal stage, even though some of the quantities may not be finalized or 100% accurate. This would make it easier for MDT and the Firm's field crews to keep track of as-built quantities.

- There was some confusion regarding the fencing. The RFP should specifically state that new fence will be required on both sides from beginning to end of the project.

- The RFP for future design-build projects should designate a specific time schedule and deadline for as-built plan submittal. It should also include a requirement for a pre-final submittal to be reviewed and approved by MDT prior to submittal of the final as-built plans.